AMENDMENTS TO THE CLAIMS WITH MARKINGS TO SHOW CHANGES MADE, AND LISTING OF ALL CLAIMS WITH PROPER IDENTIFIERS

Claims 1-24 are cancelled without prejudice.

Add the following claims

25. (New) A process for producing a surface texture on an arbitrarily curved body through layer by layer removal of material comprising the steps of:
    - describing the surface of the arbitrarily curved body by means of at least one polygon network,
    - said polygon network being divided into partial surfaces of single polygons wherein each polygon corresponds to a raster image containing a plurality of pixels such that a certain number of pixels describe a detail of the surface texture of the body,
    - associating each pixel in the raster image a gray level to thereby provide each area with a distribution of gray levels through the number of pixels, wherein each gray level is associated a distance value corresponding to the distance of the curved surface in this pixel to the surface texture,
    - removing layers of material from the surface of the curved body pursuant to the gray level value by means of a removal agent.

26. (New) The process according to claim 25, wherein the distance value determines a number of layers from which the material is removed.

27. (New) The process according to claim 26, wherein the distance value is a multiple of a thickness of a layer.

28. (New) The process according to claim 26, wherein a layer is described by its own polygon network.

29. (New) The process according to claim 26, wherein a layer is constructed from partial surfaces.

30. (New) The process according to claim 29, wherein the partial surfaces are polygons.

31. (New) The process according to claim 29, wherein the partial surfaces of a layer adjoin one another through common border areas.

32. (New) The process according to claim 31, wherein the border areas of the partial surfaces of adjacent layers are not superposed.

33. (New) The process according to claim 32, wherein the partial surfaces of adjacent layers are offset relative to one another.

34. (New) The process according to claim 32, wherein the partial surfaces of adjacent layers are rotated relative to one another.

35. (New) The process according to claim 32, wherein the partial surfaces of adjacent layers are arranged at random.

36. (New) The process according to claim 32, wherein the partial surfaces of adjacent layers are of different size.

37. (New) The process according to claim 25, further comprising the step of inputting information for the polygon network constructed from partial surfaces into a computer control program for controlling the removal agent.

38. (New) The process according to claim 37, wherein the control program determines work areas for the removal agent.

39. (New) The process according to claim 38, wherein a work area comprises at least one partial surface.

40. (New) The process according to claim 38, wherein a work area is located inside a focal area of the removal agent.

41. (New) The process according to claim 38, wherein a work area is scanned line by line by the removal agent.

42. (New) The process according to claim 41, wherein during scanning the removal agent is switched on, when a pixel with a gray level is detected in a layer of the work area.

43. (New) The process according to claim 41, wherein during scanning the removal agent is not switched on if no pixel with a gray level is detected in a layer.

44. (New) The process according to claim 25, wherein for a partial surface a different angle is preset for the removal agent acting on the partial surface.

45. (New) The process according to claim 44, wherein the removal agent strikes the partial surface obliquely.

46. (New) Apparatus for layer-by-layer removal of material from a body of random topology for producing a three-dimensional structure on the body comprising:

a computer for modeling the topology in response to a first polygon network containing information commensurate with the topology;

a removal tool operated by the computer for point-wise removal of material in dependence on the information; and

projection means for projecting the information of the first polygon network to a second polygon network having a plurality of polygons, each polygon having a work area which is associated to the removal tool and described by at least one raster image so that the removal tool executes a

material removal in the work area in response to information stored in the raster image for each polygon of the second polygon network.

47. (New) The device according to claim 46, wherein the raster image is generated by a scanning device containing information about the point-wise removal of material.

48. (New) The device according to claim 46, wherein the removal agent has a focal area and the work area is located entirely within the focal area.